# Attachment 4
# (Addendum to the July 9, 2001 Staff Report)

## Additional Staff Recommended Changes to Proposed Final 2001 Ozone Attainment Plan

(Underlined text indicates new additions. ~~Strike through~~ text indicates deletions.)

---

Page 39

Table of emission reduction estimates for Control Measure MS-1, Improved Motor Vehicle Inspection and Maintenance Program:

Emission Reduction Estimates:

| | Volatile Organic Compounds (tons/day) | | | | | | |
|---|---|---|---|---|---|---|---|
| Source Category: | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 |
| *On-Road Motor Vehicles (Evaporative Emissions Only)* | 105 | 98 | 92 | 87 | 82 | 78 | 74 |
| Subject to Control* | 12.1 | 12.3 | 12.5 | 12.6 | 12.9 | 13.1 | 13.1 |
| Potential Reduction** | 0 | 0 | ~~1.~~0<u>0</u> | ~~3.~~0<u>0</u> | ~~3.~~5<u>0.5</u> | ~~4.0~~<u>2.0</u> | 4.5 |

* EMFAC 2000 Assumption: 1.68% of fleet leaking gasoline at 4.3 grams/mile.
** Source: California Air Resources Board.

---

Page 40

Description of Control Measure SS-11

District Regulation 8, Rule 3 controls the volatile organic compound (VOC) content of architectural coatings, which are those coatings used on stationary structures, appurtenances and pavement. In June, 2000, the Air Resources Board (ARB) adopted a Suggested Control Measure (SCM) for architectural coatings. The SCM is based on South Coast AQMD's Rule 1113 revisions adopted in 1996, 1998 and 1999 and on survey data of available coatings. Control Measure SS-11 would adopt the provisions of the SCM into Rule 3. Adoption of the SCM limits will reduce allowable VOC emissions from the largest volume categories of architectural coatings, will redefine and add some categories of coatings, and may provide flexibility options for manufacturers of architectural coatings. <u>During rule development for this measure, the District will continue to apply the District Stratospheric Ozone Policy (Board Resolution 2053) to assure that rule provisions do not allow the use of stratospheric ozone depleting substances or toxic air contaminants as substitute solvents.</u>

---

Page 42

Description of Control Measure SS-13

District Regulation 8, Rule 14 limits the VOC content of coatings applied to large appliances. Regulation 8, Rule 19 applies similar limits for the coating of metal parts. Neither rule includes VOC limits or composite partial pressure limits for cleanup and surface preparation solvents. The South Coast AQMD and a few other California districts have adopted limits for solvents. Some districts also allow, as an alternative, the use of an enclosed solvent cleaner for clean up of spray equipment. The district rules typically include a VOC limit for surface preparation and clean-up solvent of about 70 g/l VOC, which is consistent with the BAAQMD limit for surface preparation solvents for the auto refinishing industry (Regulation 8, Rule 45). Many low-VOC solvents are currently available to meet such a limit. Emission reductions are not expected to be large because the metal parts coating industry already uses aqueous solutions like phosphate rinses or anodizing baths for many surface preparation tasks. During rule development for this measure, the District will continue to apply the District Stratospheric Ozone Policy (Board Resolution 2053) to assure that rule provisions do not allow the use of stratospheric ozone depleting substances or toxic air contaminants as substitute solvents.

---

Page 43

Description of Control Measure SS-14

Current District Regulation 8, Rule 16 limits the VOC content of cleaning solutions used in cold cleaners. The rule is based in part on South Coast AQMD Rule 1171. The South Coast rule sets a 50-gram-per-liter standard for general cleaning but exempts paper-based gaskets and clutch assemblies from this standard. It also includes a number of specialized cold cleaning categories with standards that vary from 600 grams per liter to 900 grams per liter. Many of these relatively high-VOC limits drop to much more stringent limits in 2005, but a technology assessment is scheduled in 2004 to evaluate whether the more stringent limits are feasible. Because the South Coast rule includes exemptions from its general cleaning standard that permit auto repair facilities, which are responsible for the majority of cold cleaning emissions, to have an organic solvent cold cleaner, and because of BAAQMD experience that enforcing restrictions on what part can be cleaned in the organic solvent cleaner is difficult, the current BAAQMD rule exempts one solvent cleaner per facility from its 50-gram-per-liter standard, but requires all other cleaners to either meet the standard or to have a permit. The BAAQMD and other districts do not require permits for the small remote-reservoir cold cleaners typically found in repair shops. In practical effect, the SCAQMD rule and the BAAQMD rule are similar. On April 19, 2001, the San Joaquin Valley Unified APCD adopted a rule with a 50-gram-per-liter standard, with more limited exemptions than those found in the SCAQMD rule and without the specialty cleaning categories. Though the BAAQMD rule has produced some of the emission reductions that would come from adopting South

Coast requirements in the Bay Area, further emission reductions could be achieved by amendments to the BAAQMD rule. Because many types of industry found in the SCAQMD and Bay Area are not found in the San Joaquin Valley, the SJVUAPCD rule does not include provisions for specialty cleaning that are found in the SCAQMD rule and are likely to be necessary in the Bay Area. This measure would require Bay Area adoption of general cleaning requirements like those in the SJVUAPCD rule and specialty cleaning requirements like those in the SCAQMD rule. During rule development for this measure, the District will continue to apply the District Stratospheric Ozone Policy (Board Resolution 2053) to assure that rule provisions do not allow the use of stratospheric ozone depleting substances or toxic air contaminants as substitute solvents.

---

Page 20

Second paragraph of Discussion subsection:

Both the 1995 and 2000 isopleth analyses include a high bias, in that the diagrams show that total elimination of man-made precursor emissions (both VOC and NOx) would still leave a residual ozone level of 88 ppb of ozone. In contrast, air monitoring data from remote areas of California and elsewhere show that natural background levels of ozone, in the absence of man-made pollution, are much lower--typically in the range of 40 to 60 ppb. Therefore, the derived emission reduction targets indicated by these diagrams are likely higher than the true values. (See Appendix F for additional information).

Page 123

APPENDIX F:
TECHNICAL CORRECTION TO ATTAINMENT ASSESSMENT -- Figure 6

This is a technical correction and explanation for one component in the Attainment Assessment: Figure 6, page 19, of the Proposed Final Ozone Attainment Plan, dated June 2001.

Figure 6 is an isopleth diagram that is one component of a multi-component Attainment Assessment, providing a "Weight of Evidence" showing of attainment, consistent with EPA recommendations for this Plan.

Isopleth diagrams are summaries of many photochemical model runs. The graphic format shows what Livermore's high ozone value will be for any combination of (regional) emission rates for VOC and NOx.

The original publication of Figure 6 indicated that additional emission reductions would be needed for attainment. It included text comments on pages 18 and 20, pointing out several shortcomings of the analysis, including: the short planning window, the definition of "attainment" by 2006, and the artificially high "background" ozone. The background ozone level is the most important and has the greatest effect on the results.

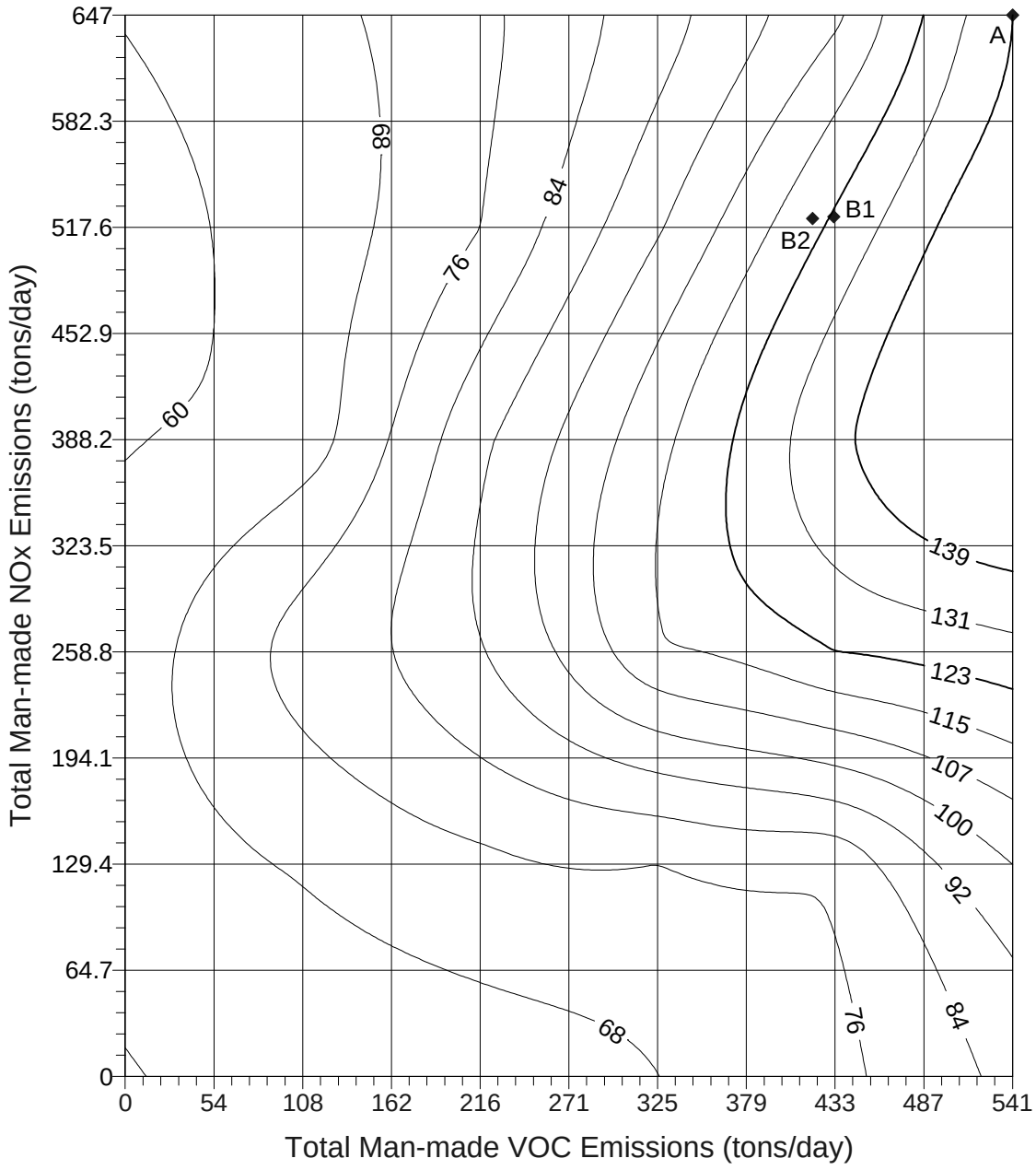
Basically, the original diagram showed that when all man-made emissions were reduced to zero, there would still be relatively high ozone--88 or 89 parts per billion. That is the number predicted by the isopleth line in the lower left corner of Figure 6. The lower left corner corresponds to zero NOx emissions and zero VOC emissions. But actual measurements of ozone in remote, unpopulated areas show that natural background ozone is only in the range of 40 to 60 parts per billion in the absence of traffic and industrial emissions.

The original Figure 6 value (in the lower left corner of the diagram) was too high because of modeling assumptions about initial and boundary conditions, and the graphics package used to plot the isopleth lines. This issue was mentioned in the Plan text on page 20, but was not quantified at the time because it did not seem critical to the overall weight of evidence conclusion of attainment.

This correction and explanation are provided now because some reviewers have focused on the original Figure 6 to the exclusion of all other elements in the Attainment Assessment. The correction consists of scaling the lower portions of the isopleth diagram such that the ozone prediction at zero emissions is 60 ppb--more consistent with observed values. The other isopleths are scaled proportionately, with diminishing corrections toward the upper right corner. The 139 ppb isopleth, starting point and design value remain unchanged.

The correction changes the conclusion of the Figure 6 analysis. After correction, it shows that the 2001 Plan would produce attainment of the national 1-hour ozone standard. An attainment design value of 120 ppb is indicated for the year 2006. This conclusion is consistent with the other components of the Attainment Assessment, and adds to the Weight of Evidence for attainment.

## **FIGURE 6 -- CORRECTED** for ozone natural background
7/12/01
## 2006 LIVERMORE OZONE SENSITIVITY USING 2000 BASE YEAR




Isopleths of Livermore peak ozone concentrations (parts per billion) based on photochemical model sensitivity simulations. Point B1 represents the projected emissions for Year 2006 considering already adopted measures. Point B2 includes the effect of new control measures included in this Plan. The isopleth labeled 123 ppb represents a design value equivalent to attainment of the national 1-hour standard. The corresponding VOC emissions level is approximately 430 tons/day, given projected NOx emissions.

Page 121

## FURTHER STUDY MEASURE 5

Measure Name: **Enhanced Housing Incentive / Station Access Program**

Description:

MTC ~~along with~~ ABAG and the Air District will seek additional and compatible funding to provide incentives ~~analyze existing potential~~ for new housing near transit and improved access to transit stations. Pooling of funds fomr a variety of sources may accelerate transit-oriented development and expand transit access options. Access considerations would include: electric station cars, car sharing, satellite transit lots, and electric bike use. Possible funding sources include: MTC's Transportation for Livable Communities, Air District Transportation Fund for Clean Air, CARB mobile source programs, State General Fund smart growth initiatives, and new regional funding from increased vehicle registration surcharge. Legislation may be required. A target funding level of $15 million per year would be considered. ~~define a set of additional incentives to accelerate development . The study will include a review of funding opportunities that could be combined to create a larger incentive package than currently exists among the individual sources of funding that could be dedicated to such a program.~~

Schedule: MTC, ABAG, and the Air District will complete the evaluation and public review by December, 2003.